DOCUMENT RESUME

ED 321 923 RC 017 624

TITLE Migrant Education Health Program, 1989. Final Report.
INSTITUTION Colorado State Dept. of Health, Denver.
PUB DATE 31 Dec 89
NOTE 60p.
PUB TYPE Reports - Descriptive (141) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Diagnostic Tests; Elementary Secondary Education; Financial Support; *Health Education; Health Needs; Immunization Programs; *Migrant Children; Migrant Education; *Migrant Health Services; Migrant Programs; Migrant Youth; Program Effectiveness; *State Programs
IDENTIFIERS *Colorado; *Migrant Education Health Program CO

ABSTRACT

This report details specific 1989 activities of the Migrant Education Health Program in Colorado. The state health department wrote the report to demonstrate that the health services it provided to migrants that year were within the scope of a contractual agreement with the Colorado Department of Education. The report was also designed to share information about the relative health status and needs of Colorado migrant children and to provide planning information for the 1990 health program. The document offers highlights of the 1989 program, including information about migrant children's vision, hearing, dental, tuberculosis testing, and immunization programs. A detailed description of health education activities is given. The financing, organization, and staffing of state migrant education projects is described, as are programs focusing on migrant health and AIDS education. The statistical data thoroughly illustrate the health status of migrant education students. Characteristics of the 1990 migrant education program are forecast. About 30 tables and graphs illustrate state migrant health statistics and comparative health figures by school site. (TES)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

TABLE OF CONTENTS

	Page
INTRODUCTION	1
Highlights of 1989 Program	3
SECTION I - HEALTH PROGRAM OVERVIEW	10
SECTION II - HEALTH STATUS OF MIGRANT EDUCATION STUDENTS	16
Diagnostic Data	20
SECTION III - HEALTH EDUCATION	26
SECTION IV - FINANCIAL RESOURCES	28
SECTION V - PREPARING FOR 1989	31

APPENDIX

COMPARATIVE STATISTICS BY SCHOOL SITE	37 - 51
Nursing/Medical	37 - 43
Dental	44 - 49
Health Education	50 - 51

INDEX OF TABLES

TABLE	TITLE	Page
I	Ethnic Status of Migrant Education Enrollees	11
II	Deployment of Seasonal Health Providers	12
III	Number of Patient Encounters	13
IV	Patient Encounters by Site of Service	14
V	Nursing Encounters by Service Delivery Site	15
VI	Dental Hygiene Encounters by Service Delivery Site	15
VII	Migrant Education Screening Outcomes	19
VIII	Migrant Education Diagnostic Frequencies	21
IX	New Illness by Diagnostic Category	22
X	Placement of Dental Sealants	25
XI	Health Education/Promotion Activities	27
XII	Financial Requirements and Sources of Revenue - Migrant Education Health Program	28
XIII	Migrant Education Contribution - Allocation by Service Category	30
XIV	Dental Treatment Costs Value of Treatment, Expenditure by Source	33
XV	Tuberculosis Testing (PPD) Results and Follow-Up	37
XVI	Immunizations	38
XVII	Vision Problems Incidence and Follow-Up	39

TABLE	TITLE	PAGE
XVIII	Hearing Problems Incidence and Follow-Up	40
XIX	Elevated Blood Pressure Incidence and Follow-Up	41
XX	Scoliosis Incidence and Follow-up	42
XXI	Below Normal Hematocrit Incidence and Follow-Up	43
XXII	Dental Problems Incidence and Follow-Up	44
XXIII	Description of Dental Follow-Up Needed	45
XXIV	Dental Follow-up Status of Treatment Reasons for No Treatment	46
XXV	Type and Number of Dental Treatment Services in Dental Office	47
XXVI	Cost of Dental Services Provided in Dental Offices by Type	48
XXVII	Preventive Dental Services by Dental Hygienists	49
XXVIII	Group Health Education Services by Nurses	51
XXIX	Group Health Education Services by Dental Hygienists	52

INDEX OF FIGURES

Figure	TITLE	PAGE
I	Age and Sex of Migrant Education Enrollees	10
II	Incidence of New Illness Per 100 Students	23
III	Sources of Revenue Migrant Education Health Program	29
IV	Allocation of Resources Migrant Education Health Program	29
V	Migrant Education Budget Allocation by Service Category	30

INTRODUCTION

1989 marks the 17th consecutive year that the Colorado Migrant Education Program and the Colorado Migrant Health Program (CMHP) have collaborated in the planning and implementation of a comprehensive health program for migrant summer school students. This collaboration has continually increased over the past several years as both programs have grown to appreciate that regardless of administrative affiliation, funding resources, or individual organizational objectives, both programs share a common mission: to participate in enhancing the physical, mental, social and economic well-being of migrant farmworkers. Both programs acknowledge that this mission requires a major focus on migrant children.

Not only do children of migrant farmworkers face the typical diseases and health problems of childhood but, in addition, they confront numerous health problems and risks associated with their migratory lifestyle and the environmental hazards associated with agricultural work. They also face numerous social, cultural and linguistic barriers which often preclude their ability to access regular, comprehensive health care. It is clear that maximum educational achievement may be hindered by undiagnosed and untreated health problems. For example, the young migrant child with undiagnosed hearing or vision problems will obviously experience difficulty in learning, regardless of the quality of the educational program presented. Other less obvious but equally significant undetected health conditions such as anemia, respiratory infections, otitis media and dental disease also contribute to listlessness and distraction due to pain which may inhibit the education process. Although it is axiomatic that children in poor health will not achieve their full educational potential, it is also critically important to view the development of healthful lifestyles and health practices as essential elements of each child's educational experience.

Working on a contractual arrangement with the Colorado Migrant Education Program, the Colorado Migrant Health Program recruits, hires, trains, and supervises seasonal health practitioners in summer migrant education schools throughout the state. The health services provided include: comprehensive health screening of all migrant school enrollees, treatment and follow-up for identified health problems, preventive dental services, and health education. Emphasis is placed on involving the family in health care. Therefore, health education and counseling takes place not only at the school site but also during school family nights and in homes. School health providers work closely with local Migrant Health staff and local providers to assure quality, comprehensive health care for migrant students.

Mutually supportive goals and the acknowledgment of the relationship between good health and the migrant child's ability to fully participate in the educational process set the stage for the 1989 Migrant Education Health Program.

The following sections detail the specific activities of the 1989 Migrant Education Health Program. This report is intended to meet the following general objectives:

1. To provide accountability to the Migrant Education Program that the health services provided were within the scope and financial estimates of the 1989 contractual agreement;

2. To share with Migrant Education staff and parents information gained about the relative health status and needs of migrant children in Colorado;

3. To provide an information base which will initiate planning efforts directed toward the 1990 Migrant Education Health Program.

HIGHLIGHTS OF 1989 PROGRAM

Significant health findings, changes, and highlights of the 1989 program are noted below. It is rewarding to note that over the years, there has been a general trend toward improvement in the overall health status of these children. Nonetheless, most of their health indices lag behind those for Colorado school children in general, reflecting the greater need for health services that continues to exist for migrant children.

HEALTH STATUS AND SERVICES

Vision

The prevalence of abnormal vision among migrant school children was 8.4% in 1989. This compares to a 7.7% abnormal incidence rate in 1988. The 1989 rate still remains higher than the 6.4% prevalence observed among all Colorado school children during 1988-89. This difference is most likely due to the higher proportion of Colorado school children who have already had refractive errors identified and corrected with glasses. Ninety five children received new glasses, and three children had frames fixed during the 1989 summer program.

Hearing

In 1989, 4.6% of migrant children attending the summer school program were determined to have abnormal hearing. This is a decrease from the 5.1% incidence rate observed in 1988. However, this is still double the incidence of 2.3% observed for all Colorado school children in 1988-89. The reasons for this increased prevalence among migrant children cannot be pinpointed with certainty, but it is likely that important contributing factors are: 1) due to poor access to health care acute ear infections are more likely to escape detection and may go on to develop complications including hearing loss, 2) crowded and unsanitary living conditions which facilitate transmission of communicable illnesses which in turn cause secondary hearing disorders, and 3) inability to afford interventions such as hearing aids or medical treatment.

Dental

The rate of children needing dental services was 59.3% in 1989. This rate has remained fairly constant over the past few years (59.5% in 1988, 60% in 1987, 58% in 1986). It is, however, significant to note that the percentage of students needing emergency care has improved dramatically, even within the last five years. In 1984, for example, the number of students needing emergency dental care was 10.5%. Five years later in 1989, only 2% of the students needed emergency dental care. While it is impossible to draw conclusions because only 30-40% of the children return each year, there can be no doubt that the dental preventive program, including the strong dental sealant component, can be credited with this change.

Nutrition

Regrettably, due to decreased funding, the Colorado Migrant Health Program did not hire any summer nutritionists in 1989. However, both nursing and dental staff received training on nutrition related issues at their summer orientation in order to continue to provide this important intervention. Dental hygienists provided nutrition-related counseling to those families where there was a high incidence of caries. Nurses provided nutrition-related counseling to families where children were found to be anemic or had other significant nutrition-related problems identified.

In all areas of the state, the Migrant Health Program has identified local nutritionists who have agreed to provide nutrition consultation on an as-need basis. These consulting nutritionists are available to provide consultation to the nurse or dental hygienist or may provide the nutritional counseling themselves.

As in previous years, all students received a hematocrit test for anemia. In 1989, 3.9% of the students were found to be anemic. This compares to a 5.8% prevalence in 1988. Of the 138 students who were anemic, 129 received iron supplementation, and the nurse provided nutritional counseling to the family. Hematocrit levels were rechecked on 119 students, and 114 of these students were no longer anemic. (Note: Hematocrit levels are rechecked after about four weeks of iron supplementation. Therefore, some students either moved or had not been on iron therapy long enough to have their hematocrit levels rechecked prior to the end of the summer program.)

In 1989, all students had their height and weight measurements taken and recorded for input into the Migrant Student Record Transfer System (MSRTS). Growth charts had been plotted on all students prior to 1989 in order to identify obesity, underweight, and short stature. The summer nutritionist then made a home visit to discuss the condition with the parents. Growth charts were not routinely plotted in 1989. The reason for this change in policy is that with no summer nutritionists and shortened school programs, the priority for nutrition-related intervention was placed on students with anemia. Obesity, underweight, and short stature are chronic nutrition-related problems. It is difficult to make a significant intervention within a short summer program where there is not time to do follow up with the student and the family. However, nurses did evaluate these conditions on a case-by-case basis and made interventions on 14 overweight students, 2 underweight students, 1 student with bulemia, and 1 malnourished student. Intervention usually consisted of at least one home visit to the family. Other interventions included one-on-one counseling with the student and group counseling and support for overweight students.

TB Skin Testing

The percentage of children with positive skin tests for tuberculosis was 6.3% in 1989. Although none of these children were found to have active tuberculosis, the positive skin test rate is an increase from the 1.3% rate observed in 1988 and is the highest rate observed since 1985. The reason for this increase is unclear but seems to reflect the nationwide trend toward an increased number of tuberculsis cases. Follow-up was provided, through the cooperation of local health departments and county nursing services, to 100% of these children. (Note: In 1988-89, only 1.0% of all Colorado school children tested positive. Because the prevalence of positive skin tests among Colorado school has historically been less than 1%, routine TB skin tests are generally no longer provided for them. However, among migrant children, the rate of positive TB skin tests substantiates the need to continue surveillance for this important public health threat among this high-risk population.)

Immunization Status

The nurses placed in the Migrant Education schools evaluated the immunization records of all children not in Colorado schools during the regular school year. This policy avoids duplication of the monitoring of immunization status required by the Colorado School Immunization Law. In 1989, 1,087 immunization records were evaluated and 235 children were given 397 needed immunizations. (In 1989, 150 more immunizations were given than in 1988.)

Handicapped Children

Several migrant school children were identified as having handicapping conditions. Fifteen new referrals were made to the Handicapped Children's Program for such conditions as ear problems, eye disorders, seizures, scoliosis, cleft palate, and shortened limb.

HEALTH PROFESSIONAL STUDENTS

In 1989, a total of 35 health professional students and interns participated in the Migrant Education Program. Those selected to participate in the program are highly motivated, independent, culturally sensitive, and have demonstrated a high level of competence in their academic and clinical training. Because of their skills and enthusiasm, these students make valuable contributions to health care delivery and health education. In 1989, 14 nursing students from the University of Colorado were placed in Migrant Education schools throughout the state. Four dental hygiene students assisted at migrant education schools. In addition, 17 dental students or dental residents provided dental treatment to migrant education students. These dental students or residents came from the University of Colorado, Northwestern University, and the University of Texas Health Sciences Center at San Antonio.

Students evaluating their community health experience with the Migrant Education Health Program see it as a valuable learning experience. Many students become providers in community or rural health care settings after graduation.

HEALTH EDUCATION

Teaching migrant children and their families about health and assisting them to develop healthful lifestyles is a high priority for the Migrant Education Health Program. In 1989, summer health team members held a total of 266 health education/promotion sessions that involved 5,471 people. These sessions involved classroom education and small group sessions, family night presentations, and staff inservices. It is gratifying that nursing staff conducted 51 more sessions in 1989 than in 1988 reaching 1,066 more students. Part of the reason for this increase is due to the increased number of nursing students that were placed in each site. Nursing students conducted many of the classroom sessions or performed nursing tasks so that nurses were able to spend time in the classroom.

A detailed description of the health education activities is reported in the "Health Education" section of this report.

PARENT ADVISORY COUNCIL

In 1987, a relationship between the Colorado Migrant Health Program and the statewide Migrant Parent Advisory Council (PAC) was formalized. The statewide PAC agreed to serve as a formal mechanism to assure that migrants have active participation in decisions that govern the operation of the Colorado Migrant Health Program.

The relationship with the PAC's is only one part of the overall CMHP governance mechanism. However, because more than one-half of Migrant Health Program users are 19 years of age or younger, parents of migrant children can offer important advice in identifying the needs of migrant children and evaluating the effectiveness of services that are provided. Additionally, because all members of the PAC's are either current or former migrants, or persons active in the provision of migrant services, PAC's are aiso a significant resource in evaluating the health services offered to adults. Therefore, although the relationship with the PAC;s is only one part of the CMHP governance mechanism, it remains a significant piece of consumer input.

Each year since 1987, CMHP staff has met with local PAC members during the summer in order to obtain their feedback and recommendations regarding health services. Migrant education directors are asked to distribute surveys to PAC members prior to the meeting. A member of the summer health team then attends the meeting, asks the questions on the survey, and records the comments from PAC members regarding quality of health service, satisfaction with health providers, locations and times of services, and fee schedules. Written comments are then sent to the Central Office of the CMHP for evaluation and action as necessary.

During the summer of 1989, CMHP summer staff met with those PAC members who had a formal summer PAC meeting. Overall, the information received from parents regarding health services was positive. Recommendations from PAC members in 1989 include: adding additional evening hours in some areas of the state, increasing contact between school health providers and parents, and extending the time summer school health providers are in the area in order to make up for shortened school programs. These recommendations are being reviewed by the CMHP and policies will be revised and/or implemented as appropriate.

Although the mechanism for PAC input has worked in some areas, there are still some weaknesses associated with this part of governance. Some migrant education programs do not have summer PAC meetings, attendance is low, and many active migrants do not attend the meetings. Since there is great potential to utilize the input of these parents for evaluating effectiveness of both health and educational services, it is hoped that the Migrant Education Program will put increased emphasis into this area in 1990.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Colorado Mig. Heal.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

AIDS EDUCATION

Although there is an apparently low rate of HIV infection (the virus that causes AIDS) in migrant farmworkers, the CMHP is committed to assuring that the incidence of infection is kept low by focussing on prevention. Relying on a solid collaborative relationship with the Colorado Department of Education's AIDS Preventiion Project, in 1989 the CMHP was involved in several AIDS-related prevention activities targeted to reach migrant farmworkers and their families with AIDS information.

Specific activities relating to the migrant education school program include:

- In coordination with Dr.Ledia Martinez, AIDS Prevention Project Consultant, the CMHP helped identify and provide AIDS training to approximately 30 teachers who work with children of migrant farmworkers throughout the state;

- Dr. Martinez presented AIDS information and reviewed components of the Colorado Department of Health's AIDS secondary curriculum with migrant parents at the spring Weld County Parent Advisory Council Meeting;

- Targeting secondary students attending the summer migrant education schools, summer migrant education nurses, working with local migrant education staff, provided 15 AIDS classes in 10 of 13 summer schools. These classes reached 306 students;

- The bilingual (Spanish/English) brochure, "What Parents Need to Know About AIDS", developed by Dr. Martinez, was distributed by migrant education nurses to 883 migrant families whose children attended the summer migrant education program.

ADOLESCENTS

The CMHP recognizes the importance of providing health services and preventive health education to the migrant adolescent population. This can be a difficult population to reach because by and large adolescents are healthy and therefore do not usually have much contact with health providers. Many of these students do not attend summer school programs because they must work in order to provide financial assistance to their families, and there are only a few formal night school programs offered.

Because of the growing secondary night school program in the Weld County area, in 1989 the CMHP placed a nurse full time at the Platteville school. This nurse provided health services to 123 adolescent students. In order to encourage these students to think about important health issues that can impact their lives, 18 health education classes were provided to these students with topics like refusal skills, becoming adults, alcohol, smoking, values clarification, relationships, and AIDS. In addition, the nurse spent one-on-one time with 15 students to complete a risk behavior assessment in order to identify and counsel students on identified risk behaviors.

In addition, nurses provided services during the evening adolescent program in Alamosa and provided screening services to the Longmont teens who received tutoring in the labor camps where they were living.

SHORTENED SCHOOL PROGRAMS

Many summer migrant education programs were shortened in 1989. No schools ran longer than six weeks, some were five weeks. This presents an enormous obstacle towards the provision of health services. Summer health staff must provide comprehensive health screening, treatment, follow-up and case management for acute and chronic health problems in a very short amount of time. In addition to presenting difficulties in providing care to students who attend these short programs, many schools ended shortly after or even before active migrants arrived in the area. In general, these active migrants students have far greater health needs than the settled out migrants and either received minimal services or no services at all. A lot of medical and dental follow up was necessary after the summer program ended, and migrant education recruiters assumed the primary responsibility for this follow up.

Indeed, the issue of short school programs was the single most significant issue that was raised by summer health providers in their exit interviews. Health providers were extremely frustrated that they were not able to provide the quality and degree of health intervention to migrant students because programs were short and active migrants did not arrive until the very end of the program. It is hoped that in 1990, programs can be extended and dates chosen more in line with the arrival of active migrants in the area. In this way, both health and educational services can be bolstered for this high-risk population.

DENTAL MANAGERS

Efforts to recruit dental hygienists, while successful program-wide, failed to identify staff for the Ft. Morgan and Lamar areas. As a result, the employment of a dental manager was implemented in these two areas. Consultation with local migrant education staff yielded persons who had previously worked with migrant education but were not employed this year because of budget cuts. A dental manager was employed half time in Ft. Morgan and full time in Lamar. While neither dental manager had a dental background, they were extremely successful because of their knowledge of migrant schools, bilingual capability, and committment to assuring services for migrant children. Preventive dental services were provided by local dental hygienists or temporarily assigned staff. The dental managers oversaw the day-to-day dental operations including classroom education and paper flow. Because of the exceptional skills and committment of these two women, there was no disruption in services. This is defintely a concept that needs to be considered in subsequent years.

DENTAL ASSISTANTS

A joint venture was initiated this year with Rocky Mountain SER involving a dental assistant training program for adolescents enrolled in youth training programs. In Rocky Ford and in Alamosa, a youth was selected who qualified under SER guidelines. In both cases the young women were classified as previous migrants. The success of the model was dependent on excellent coordination between local migrant education staff, migrant health staff, a local dentist and the summer dental team. Training as a dental assistant was the primary responsibility of the summer dental team and involved didactic sessions as well as the opportunity for chairside dental assisting in the local dental office. Training materials, as well as a certificate of course completion, were provided by the CMHP. Exposure to a career in dentistry for the participants, in conjunction with much needed additional dental manpower to assist in service provision for migrant children, produced a success story for the program. Explorations are currently underway to duplicate this model in other areas of the state in 1990.

SECTION I
HEALTH PROGRAM OVERVIEW

Service Population Profile

A total of 1,656 migrant children in migrant education schools received one or more services from the Colorado Migrant Health Program during the 1989 summer Migrant Education Program. (This is a decrease from the 1,982 migrant education students who received services in 1988.) In addition to the migrant education students, 97 children received services through daycare programs operating in conjunction with Migrant Education Schools in Fort Collins and Alamosa. Figure I shows the number of migrant education students (daycare children not included) within the different age groups as well as the proportion of male to female students. Students ranged in age from four years old to 21 years old with the majority (74%) between the ages of six and 11. Of the 1,656 students, 48.7% were female and 51.3% were male.

Migrant student enrollees were predominately Hispanic (98.6%) with the remaining students being Anglo and Indian. Table I reflects the ethnic status.

FIGURE I

AGE AND SEX OF
MIGRANT EDUCATION ENROLLEES
-1989-

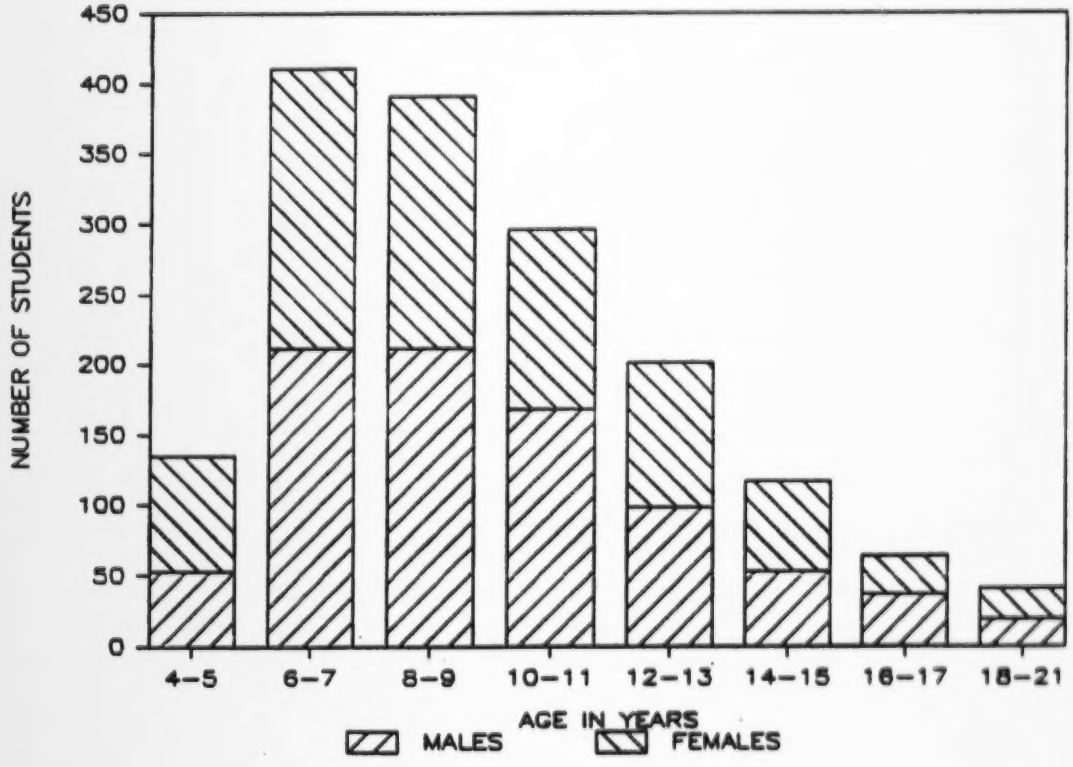


TABLE I

ETHNIC STATUS OF
MIGRANT EDUCATION ENROLLEES
-1989-

ETHNICITY	FREQUENCY	PERCENT
HISPANIC	1,633	98.6%
ANGLO	10	0.6
INDIAN	13	0.8
TOTAL	1,656	100 %

Service Providers

In order to provide a full continuum of health care, two categories of health providers are required: 1) nearly 200 local providers (physicians, dentists, pharmacists, allied health providers) either in private practice or working with community-based care organizations, and 2) seasonal-hire staff who are recruited nationwide for the duration of the Migrant Education summer schools. During 1989, 73 health providers were hired on this basis. This included:

- 17 Registered Nurses
- 14 Nursing Students
- 20 Dental Hygienists
- 4 Dental Hygiene Students
- 18 Dental Students or Recent Dental School Graduates

These health providers worked as a multidisciplinary team and were deployed to 13 Migrant Education summer school sites. The placement of these providers is displayed in Table II as Full Time Equivalents.

In addition, 13 health aides were employed by local migrant education programs. Health aides worked either full or part time and mainly assisted the health teams with transportation. The number of health aides has decreased over the years (there were 17 in 1988). When there were more health aides, the aides were able to offer great assistance to the health team with health screening, health records, and translation on home visits. With fewer aides, the summer health team must provide these services without assistance, decreasing their efficiency and taking away from other direct student services.

Orientation is an important part of training health providers for the services they will provide. Summer health providers spent two and one half days of intensive training with the Migrant Health Program and approximately two days orientating to the local area (meeting migrant education staff and local health providers, finding out where migrants live and work, reviewing health records, etc.). This allows summer staff to begin providing high quality health care from the first day of the school program.

TABLE II

DEPLOYMENT OF SEASONAL HEALTH PROVIDERS
(FULL-TIME EQUIVALENTS)
-1989-

Site	Nurses	Nursing Students	Dental Hygienists	Dental Students
Fort Lupton	1.5	2	2.5	2
Brighton	1	1	2	1.5
Longmont	2	2	3	2
Fort Collins	1	1	2	2
Greeley	1.3	2	3	2
Platteville	0.7	0	1.5	0.5
Fort Morgan	1	1	1	2
Lamar	1	1	1	0
Rocky Ford	1.5	2	2	2
Pueblo	1	0	1	0
Alamosa	2	1	3	2
Delta	1	1	1	1
Grand Junction	0.5	0	1	1
TOTAL FULL-TIME EQUIVALENTS	15.5	14	24	18

Health Encounters

During the summer of 1989, 1,656 migrant education enrollees had a total of 11,147 encounters with health personnel from the Colorado Migrant Health Program. This represents an average of seven encounters per student.

A health encounter is defined as a face-to-face interaction between a health provider and a student (or the student's parent) which requires independent judgment based upon the health provider's training and is of sufficient importance to be recorded in the patient's chart. Health care encounters are divided into the following categories:

1. New and repeat medical encounters
2. New and repeat dental encounters

"New" medical and dental encounters are those that happen during the first interaction with the student. "Repeat" encounters are those that happen subsequent to the initial (new) contact and are either follow-up to the condition identified during the initial contact or new health conditions which have arisen after the first contact.

The following table presents the number of encounters by service category:

TABLE III

NUMBER OF PATIENT ENCOUNTERS
-1989-

SERVICE CATEGORY	CATEGORY FREQUENCY	TOTAL	PERCENT OF TOTAL
MEDICAL		5,530	49.6 %
New	1,656		
Repeat	3,874		
DENTAL		5,617	50.4
New	1,611		
Repeat	4,006		
TOTAL	11,147	11,147	100 %

It is also of interest to note the sites at which these services were delivered to migrant children. The following table reflects this information:

TABLE IV

PATIENT ENCOUNTERS
BY SITE OF SERVICE
-1989-

SERVICE SITE	FREQUENCY	PERCENT
MIGRANT EDUCATION DAY SCHOOL	7,400	66.3 %
MIGRANT EDUCATION NIGHT SCHOOL	655	5.9
DENTAL OFFICE	2,335	20.9
MEDICAL OFFICE *	320	2.9
STUDENT'S HOMES	325	2.9
CMHP CLINIC	44	0.4
HOSPITAL	9	0.1
HEALTH DEPARTMENT	66	0.6
TOTAL	11,154	100 %

* Includes offices of physicians, osteopaths, optometrists, opthalmologists, audiologists, etc.

As is evident from the preceding table, 72.7% of all encounters occurred at a school site. Offices of medical and dental practitioners were the next most frequent sites of services (23.8%) followed by services delivered in the home (2.9%).

It is of additional interest to examine where services were delivered by individual health practitioners. The following tables reflect the sites of service delivery by nursing and dental hygiene personnel:

TABLE V

NURSING* ENCOUNTERS BY
SERVICE DELIVERY SITES
-1989-

SERVICE SITE	FREQUENCY	PERCENT
MIGRANT EDUCATION DAY SCHOOL	4,469	86.4 %
MIGRANT EDUCATION NIGHT SCHOOL	330	6.4
HOME	286	5.5
CMHP CLINIC	21	0.4
OTHER**	65	1.3
TOTAL	5,171	100 %

NOTES: *Includes Migrant Education nurses, CMHP nurses, nursing students and health aides.

**Includes physicians' offices, health departments, and WIC offices.

TABLE VI

DENTAL HYGIENE ENCOUNTERS
BY SERVICE DELIVERY SITES
-1989-

SERVICE SITE	FREQUENCY	PERCENT
MIGRANT EDUCATION DAY SCHOOL	2,891	86.1 %
MIGRANT EDUCATION NIGHT SCHOOL	324	9.6
HOME	30	0.9
DENTAL OFFICE	114	3.4
CMHP CLINIC	0	0.0
TOTAL	3,359	100 %

NOTE: This table does not reflect the encounters by dentists and dental students.

SECTION II

HEALTH STATUS OF MIGRANT EDUCATION STUDENTS

Migrant children experience the same kinds of illnesses that are common to all children. However, it is generally observed that, for a variety of reasons, their overall health status is poorer than that of non-migrant children in Colorado and in the United States. Poverty, limited education, linguistic differences, and other factors interfere with access to both preventive health care (including immunizations, identification of impaired hearing, vision, or development, etc.) and health care for acute and chronic illnesses. As a result, a significant amount of preventable illness occurs, with dental disease being primary among these. Other disease states that are not promptly identified may be allowed to progress and become more serious or even develop irreversible complications. Crowded housing and poor sanitation conditions also contribute to an excess of communicable diseases, ranging from relatively benign respiratory infections to tuberculosis. In addition, injuries are common among older migrant children who work in the fields as well as among their younger siblings who may have no safe places in which to play.

In order to promptly identify the health problems found in these children, summer health teams review student health history information that is collected by migrant education recruiters. This history provides information about the student's health and will indicate if the parent has any concerns related to the child's health or development.

In addition, students are given routine evaluation in the following areas during the summer school program:

1. height and weight, in order to record and track growth as indicated
2. hematocrit, in order to identify anemia
3. audiometry, in order to identify abnormal hearing
4. vision testing
5. screening for scoliosis (for 11-year old children)
6. blood pressure
7. dental examination
8. PPD skin test for tuberculosis (as indicated)

In order to identify the presence of these conditions as soon as possible (so that intervention may be offered while the children are available for services), all health team members participate in screening clinics conducted during the first week that children attend migrant summer schools. Screening is offered thereafter on a weekly basis to identify health problems in students who begin attending at a later date. The following is a summary of the screening procedures offered:

Height and weight measurements are taken on all migrant school children. Height and weight values are recorded on the student's health data entry form. Should a student have a significant medical problem related to overweight, underweight or short stature, a growth chart will be plotted and a nursing and/or medical intervention will be made.

Hematocrits are done to assess the possibility of iron deficiency anemia. Children are identified as being anemic if their hematocrit reading is below the indicated level:

Age		Hematocrit
6 mo.-2 years		< 33
3 - 4 years		< 34
5 - 9 years		< 35
10-14 years		< 36
15-18 years	male	< 39
	female	< 36
18 years +	male	< 42
	female	< 36

For those students identified as being anemic, the nurse makes a home visit to assess the child's medical history, discuss diet intervention, and give instructions for taking iron supplementation. Children with abnormal hematocrits are rescreened at intervals during the summer to assess whether or not the anemia has been resolved or improved.

Blood pressures are taken for two reasons. The first reason is that elevated blood pressure may indicate serious disorders such as kidney disease or cardiovascular disease. The second reason is that blood pressure measurements serve as baseline data on a child so that the child's "normal" blood pressure can be established for future reference. A blood pressure is considered to be abnormal if it is greater than a certain reference point on three different occasions. The criteria used to identify abnormal blood pressure is as follows:

Age	B/P Greater Than
<6	110/75
6 - 10	120/80
10 - 14	125/85
14 - 18	135/90

If the blood pressure is found to be elevated on three different occasions, the child is referred to a physician.

Hearing screening is conducted on all testable students (some students may be too young to understand the screening instructions and are therefore untestable). A child must hear the tone in both ears at the following levels in order to pass the hearing screening:

4000 Hz at 25 dB
2000 Hz at 20 dB
1000 Hz at 20 dB
500 Hz at 25 dB

If a child fails the hearing screening, he is rescreened on another day unless there is evidence to suggest the presence of otitis media. (If there is such evidence, the nurse will immediately refer the child to a physician and rescreen the child's hearing after resolution of the infection.) Children who fail screening twice are referred to a local audiologist for further diagnostic evaluation.

Scoliosis screening is done on all 11 year old children by the Migrant Education Nurse. This screening procedure is done to detect any lateral curvature of the spine which, if present, may worsen during the adolescent growth spurt. Abnormals are rescreened, and, if still abnormal, are referred to a medical provider for evaluation and possible x-ray. If there is need for immediate intervention, the child is referred to the Handicapped Children's Program.

Vision screening is done on all testable children using a Snellen "E" chart. The following criteria constitute a failed vision screen:

3-4 year old:	if 20/60 or worse either eye
5 year old:	if 20/50 or worse either eye
6 years and older:	if 20/40 or worse either eye

If a child fails the vision screening, he is retested another day. If he fails a second time, a referral to an optometrist or opthalmologist is made. Children are also referred if they demonstrate a two-line differential (eg. 20/20 OD, 20/40 OS) on the Snellen chart.

Dental screening consists of an examination of the teeth and oral structures. The purpose of this screening is to identify those children in need of professional dental treatment.

Dental screening is done by the dental hygienist or as a cooperative effort with the dental student or resident. At the time of screening, the children are prioritized according to the severity of need. Children with the most serious treatment needs are referred first for care, with less serious conditions being referred as time and financial resources allow. Because dental problems are related in part to poor nutrition and oral hygiene practices, the need for home visits for parental counseling concerning rampant or excessive caries as well as bottle mouth caries is also determined.

PPD (Purified Protein Derivative) testing is a skin test which determines exposure to the tuberculosis bacillus. This screening procedure is arranged by or performed by the Migrant Education Nurse on students who do not attend school in Colorado during the regular school year and who have never been tested, or who are kindergartners and seventh graders who have not been tested within the past three years. The skin test is read 48 to 72 hours later. Children with positive tests are referred to local health departments or county nurses for chest x-rays and other follow-up. This procedure requires signed parental consent.

The following table reflects the "abnormal" findings identified through the screening process in 1989:

TABLE VII

MIGRANT EDUCATION
SCREENING OUTCOMES
-1989-

SCREENING PROCEDURE	NUMBER SCREENED	NUMBER ABNORMALS	PERCENT ABNORMAL
HEMATOCRIT	1,649	64	3.9 %
BLOOD PRESSURE	1,656	1	0.06
HEARING	1,650	76	4.6
SCOLIOSIS	337	9	2.7
VISION	1,652	138	8.4
TB SKIN TESTS	334	21	6.3
DENTAL	1,611	955	59.3

Note: A site specific summary of screening outcomes and follow-up is included in the appendix.

Once students are screened, dental hygienists provide case management to assure students receive dental treatment. In addition, hygienists provide cleanings and fluoride application.

Nurses provide referrals and case management for students with abnormal screening results. In addition, nurses provide day-to-day nursing care and case management for acute and chronic health problems.

Diagnostic Data

For all significant encounters between health care providers and migrant education students, diagnostic information is recorded, coded, and tabulated so that the incidence of illness episodes experienced by these children during the six to eight weeks of the summer school program can be analyzed. This diagnostic data provides important information regarding the health status and health needs of this population.

Table VIII shows the total incidence during the 1989 Migrant Education summer school program of illness episodes in terms of diagnostic categories. (These figures represent new illnesses only, not the total number of encounters for illnesses).

TABLE VIII
MIGRANT EDUCATION
DIAGNOSTIC FREQUENCIES
-1989-

DENTAL	
Caries	955
Oral Trauma	20
TOTAL	975
INJURIES	
Abrasion/Bruise	200
Laceration/Puncture	66
Sprain/Strain	42
Insect/Animal Bite	32
Burn	17
Fracture	1
Other Injuries	62
TOTAL	420
DISEASES OF THE EYE, EAR, NOSE, AND THROAT	
Abnormal Vision	143
Hearing Loss	76
Otitis Media	51
Epistaxis (nosebleed)	26
Conjunctivitis	22
Cerumen (wax)	22
Allergies/Hayfever	4
Serous Otitis	4
Other EENT	65
TOTAL	413
DISEASES OF THE SKIN	
Infection/Cellulitis	21
Impetigo	14
Contact Dermatitis	9
Eczema	8
Hives	8
Other (warts, rashes, etc.)	121
TOTAL	181
COMMUNICABLE DISEASES	
Pediculosis (head lice)	57
URI/Cough/Sore Throat	50
Tuberculosis/Positive PPD	21
Strept Throat/Tonsillitis	16
Other Viral Syndromes	11
Hepatitis A	2
Other Communicable Disease	14
TOTAL	171

GASTROINTESTINAL DISORDERS	
Abdominal Pain	71
Diarrhea/Vomiting	30
Ulcer/Gastritis	1
Other Digestive	14
TOTAL	116
NEUROLOGIC	
Headache	93
Dizziness/Fainting	5
Epilepsy/Seizure	3
TOTAL	101
NUTRITION-RELATED	
Anemia	64
Obesity	10
Underweight	1
TOTAL	75
GENITOURINARY/GYNECOLOGIC	
Urinary Tract Infection	11
Menstrual Problem	4
Pregnancy	1
Other GU/GYN	5
TOTAL	21
OTHER	
Psycho-social Problems	24
Fever	20
Heart Murmur	17
Fatigue/Malaise	10
Scoliosis	9
Arthritis/Joint Pain	8
Other Heart/Blood	8
Asthma	2
Birth Defect	2
Other	9
TOTAL	109

Table IX summarizes the incidence of illness episodes for each broad diagnostic category, and Figure II displays the information graphically in terms of incidence of new illnesses in each diagnostic category per 100 students who received health screening. This means that during the 1989 summer program, for every 100 students, there were 60 who had dental caries, 25 injuries, 25 disease episodes of the eyes, ear, nose, and throat (including hearing or vision problems), etc. It should be noted that these incidence rates provide an under-representation of the actual incidence of illnesses for a number of reasons. For example, many children were not present in the area during the entire summer and had undocumented health problems during this time. Illnesses which occurred over the weekend or which prevented children from attending school may have been missed. When illnesses or abnormalities were found upon screening, screening codes were sometimes used instead of diagnostic codes for these illnesses. Similarly, coded documentation of diagnoses may have been incomplete for children with several simultaneous health problems.

Figure II also compares graphically the differences in illness episodes between the 1988 and 1989 summer programs. Note that in 1989, there was an increased incidence of new illness episodes in the categories of eye/ear/nose/throat, communicable diseases, diseases of the skin, and neurologic illnesses. Decreases were noted in the genitourinary/gynecologic and nutrition categories. The reason for the significant drop in the incidence of new illnesses in the nutrition category has to do with the 1989 change in nutrition policy. Because summer nutritionists were not hired, nutrition priority was placed on students with anemia. Nurses provided intervention for this condition, but did not routinely screen and provide intervention for obesity and underweight as had been done in previous years.

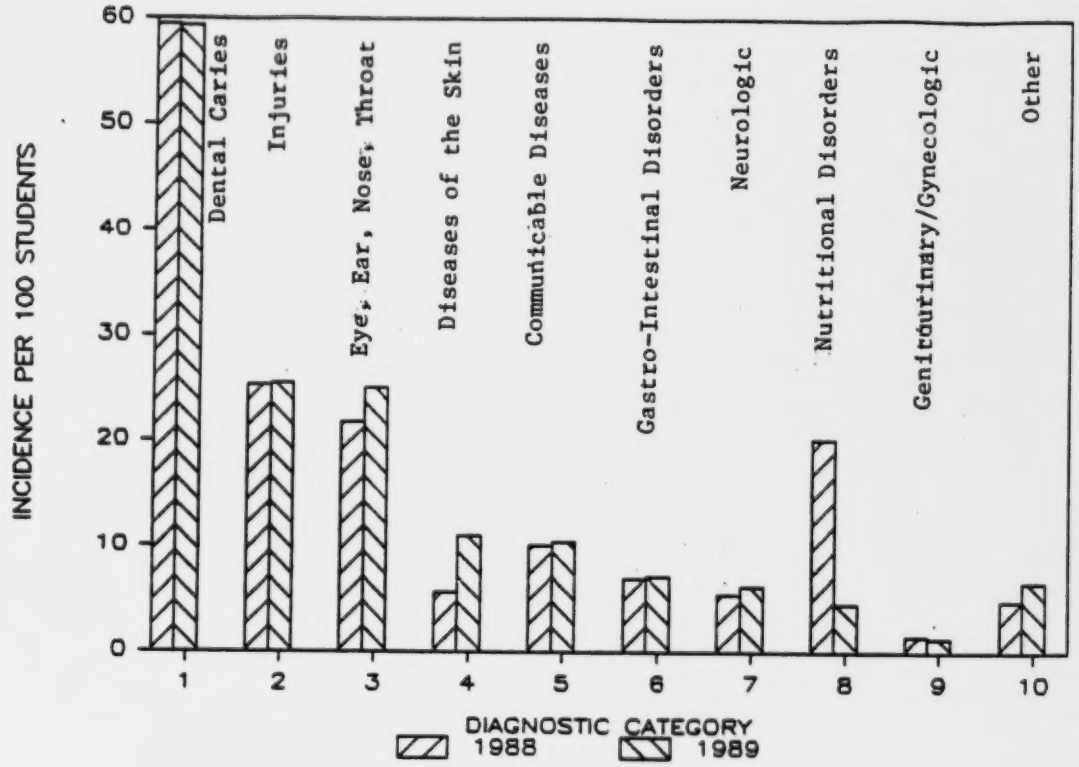
TABLE IX

NEW ILLNESS BY
DIAGNOSTIC CATEGORY
-1989-

Diagnostic Categories	Rank	Incidence	Incidence/100 Students
Dental Caries	1	955	59.3
Injuries	2	420	25.4
Eye, Ear, Nose, and Throat	3	413	24.9
Diseases of the Skin	4	181	10.9
Communicable Diseases	5	171	10.3
Gastro-Intestinal Disorders	6	116	7.0
Neurologic	7	101	6.1
Nutritional Disorders	8	75	4.5
Genitourinary/Gynecologic	9	21	1.3
Other	10	109	6.6

FIGURE II

INCIDENCE OF NEW ILLNESS
PER 100 STUDENTS
1988 and 1989



In order to evaluate the health status of Migrant Education children served in Colorado in 1989, analysis of this diagnostic information should be compared with similar information obtained from other school-age populations. Unfortunately, there is limited data available from other populations that is truly comparable. The best comparable data has been obtained from school health screening of children in Colorado during 1988-89 and includes results of vision screening, hearing screening, and skin test screening for tuberculosis. The criteria used by other Colorado school programs to define "abnormal" values is identical to criteria used by the CMHP. Compared with Colorado school children, 1989 Migrant Education students were found to have a higher incidence of abnormal vision and twice the incidence of abnormal hearing. Migrant Education students experienced a 6.3% rate of positive reactions to a PPD skin test for tuberculosis, compared with a 1.0% positive reactivity rate among Colorado school children.

As is readily apparent from Table IX and Figure II, dental disease is the major health problem for migrant children with 955 students (59.3%) having identifiable dental problems. Of these, 37 students (2%) were identified as requiring immediate referral for relief of pain and/or treatment of dental infection.

The following statements may be offered:

- 66% of students with identified dental problems received complete treatment;
- 13% of students with identified dental problems received partial treatment;
- there were a total of 2,335 visits to dental offices, an average of 3.1 visits per child receiving treatment;
- 2% of students with identified dental problems were not referred for treatment because their dental problems were low priority;
- 19% of students with identified dental problems were not referred due to one of the following reasons: the student had their own dentist, had poor attendance, moved before dental treatment could be initiated, or because a parent did not sign a consent form. (Students moving or lack of time was the major reasonwhy students were not referred.)

In addition to treatment offered for acute and chronic dental problems, substantial emphasis was placed on preventive dental services. During the 1989 summer school session, a total of 1,428 students received dental prophylaxis and fluoride application treatments. This represents 89% of the children receiving dental screenings. Portable dental equipment made it possible for the dental hygienist to provide the majority of this treatment within the school setting as well as enhancing the placement of dental sealants.

Pit and fissure dental sealants were provided again this year. A pilot project in 1983 in Longmont, Brighton, and Fort Lupton proved an overwhelming success. Expansion of the program from 1983 to 1989 continued. Two dental hygienists with specialized equipment were hired to travel from school to school to place sealants.

Sealants are a clear resin material that is placed on acid etched chewing surfaces of teeth. The material flows into the deep pits and fissures and hardens. Sealants are effective in preventing decay in these surfaces up to five years. Fluorides protect the smooth surfaces of the teeth from decay. Therefore, they will also be continued.

BEST COPY AVAILABLE

Sealant statistics from the past years are as follows:

TABLE X
PLACEMENT OF DENTAL SEALANTS
1987 - 1989

	1987	1988	1989
# Children Receiving Sealants	788	794	587
# Sealants Placed	3,152	2,613	2,121

It is significant to note that since the first full year of operation of the dental sealant program, data have been consistent. Each year approximately 780 children have received over 3,000 sealants. However, in 1989 only 587 children received a total of 2,121 sealants.

While in-depth data analysis is still underway, initial reaction is one of cautious celebration of program success. Properly applied, dental sealants should last at least five years, if not the life-time of the tooth. Retention rate in the program over the years has averaged 88-92%. Given that each child has a definitive number of permanent teeth, the 1989 data appears to illustrate the expected down curve resulting from approaching maximum penetration of the population. There will always be a need for an aggressive dental sealant program because of new children entering the system each year and the erruption of additional teeth in those returning to the program.

Further analysis of the data will be conducted, but the staff anxiously awaits the results of the 1990 program to determine if the trend continues. These trends are important for future program planning and staffing.

SECTION
III

HEALTH EDUCATION

In order to enhance the general health status of the migrant farmworker population it is necessary to place a high priority on teaching and assisting migrant children to develop healthful lifestyles and health practices.

In 1989, emphasis was again placed on integrating health education into classroom activities.

Health Education Curriculum

The Migrant Summer School Health Education Curriculum (MSS-HEC) was again available in all summer school programs. This curriculum provides health education units on selected topics: dental health, nutrition, safety education, personal hygiene, wellness, and sex education.

The units were developed for Level I (lower elementary), Level II (upper elementary), and Level III (grades 6-8). Each topic area and level have two to four classroom lessons developed around specific, measurable learning objectives. Each lesson contains:

1. A concept sheet for the teacher with basic background information on the subject matter.

2. Learning objectives and related bilingual activities.

3. Supplemental materials which include hand-out pamphlets, student worksheets, and related activities in other classes.

4. Evaluation instruments.

The MSS-HEC was utilized in all 12 of the summer elementary schools. All of the summer health teams reported utilizing the MSS-HEC except the team in the Pueblo school. In Pueblo, a teacher is assigned to teach health education and utilizes the MSS-HEC. Besides Pueblo, teachers in Grand Junction and Ft.Lupton reported using the MSS-HEC. Teachers in other schools, although very cooperative about letting the health team provide classroom health education, did not teach from the MSS-HEC.

Health Education Activities by Summer Health Staff

All summer health team members were given the responsibility of engaging in health education and promotion activities. These activities involved participation in classroom education, discussion groups, staff inservice training, and presentations at family nights. Table XI shows the number of health education/promotion activities offered in the classroom, at staff inservices, and at family nights. Tables XXVIII and XXIX in the appendix detail health education services provided by nurses and dental hygienists in each site.

TABLE XI

HEALTH EDUCATION/PROMOTION ACTIVITIES -1989-

CATEGORY	GROUP/CLASS-ROOM SESSIONS	# PERSONS ATTENDING	STAFF IN-SERVICES	# PERSONS ATTENDING	FAMILY NIGHT PRESENTATIONS	# PERSONS ATTENDING
Nursing	161	3,189	5	71	11	251
Dental	79	1,526	4	43	6	391
TOTALS	240	4,715	9	114	17	642

The number of health promotion activities conducted by the Migrant Health Teams decreased from 1988. In 1988 a total of 404 health education/promotion sessions involving 8,383 people were held. In 1989, 266 sessions involving 5,471 people were held. There are two major reasons for the decrease in 1989: 1) In past years, summer nutritionists provided a number of health education classes. In 1989, summer nutritionists were not hired. 2) The shortened school programs created a need for health professionals to concentrate on the delivery of direct health services, leaving less time for health education.

Even though the total number of health education sessions decreased in 1989, the number of nursing sessions increased. Nursing staff conducted 51 more sessions in 1989 than in 1988 reaching 1,066 more students. Part of the reason for this increase is due to the increased number of nursing students that were placed in each site. Nursing students conducted many of the classroom sessions or performed nursing tasks so that nurses were able to spend time in the classroom.

Classroom education and group sessions included the topics contained in the MSS-HEC curriculum (dental health, nutrition, safety education, personal hygiene, wellness, and sex education). In addition, other health education topics addressed were: anatomy, adolescent issues, AIDS, pesticide exposure, first aid (poisons, burns, choking, hot/cold emergencies, bleeding), body mechanics, healthy heart, smoking, exercise physiology, why immunizations are necessary, what happens when someone goes to the hospital, babysitting, how to care for a fever, care of eyeglasses, refusal skills, relationships, relating to handicapped people, substance use and abuse (alcohol/drugs), sexual abuse/date rape, sexually transmitted diseases, life development, preventing heat stroke, water safety, fireworks safety, and values clarification.

Family night presentation topics included dental care, hypertension, how to use a thermometer, and how to care for a fever. The topics were presented in the form of group presentations, visual displays, handouts, and one on one counseling.

Staff inservice topics included information on summer health services and screening, general dental health, bottle mouth syndrome and seizure precautions.

SECTION
IV

FINANCIAL RESOURCES

In order to deploy a comprehensive health program for the 1,656 students enrolled in the 13 Migrant Education summer schools, it was necessary to carefully coordinate a variety of financial resources. The following table reflects the financial requirements and sources of revenue for the Migrant Education Health Program.

TABLE XII

FINANCIAL REQUIREMENTS AND
SOURCES OF REVENUE
MIGRANT EDUCATION
HEALTH PROGRAM
-1989-

	Total Revenue Required	Sources of Revenue			
		Colorado Migrant Health Program	Maternal Child Health Grant	*Other	Colo. Dept. of Educ.
Personnel	$169,447	$22,437	$33,060	$ 43,100	$ 70,850
Travel	7,946	5,281			2,665
Operating (recruitment, printing, key punch, etc.)	6,877	6,877			0
Orientation	7,920	7,920			0
Supplies	9,108	7,800			1,308
Treatment	193,485	18,830	23,593	126,276	24,786
Total Direct Costs	394,783	69,145	56,653	169,376	99,609
Indirect Costs	20,071	9,680	0	0	10,391
GRAND TOTAL	$414,854	$78,825	$56,653	$169,376	$110,000
	(100%)	(19.0%)	(13.7%)	(40.8%)	(26.5%)

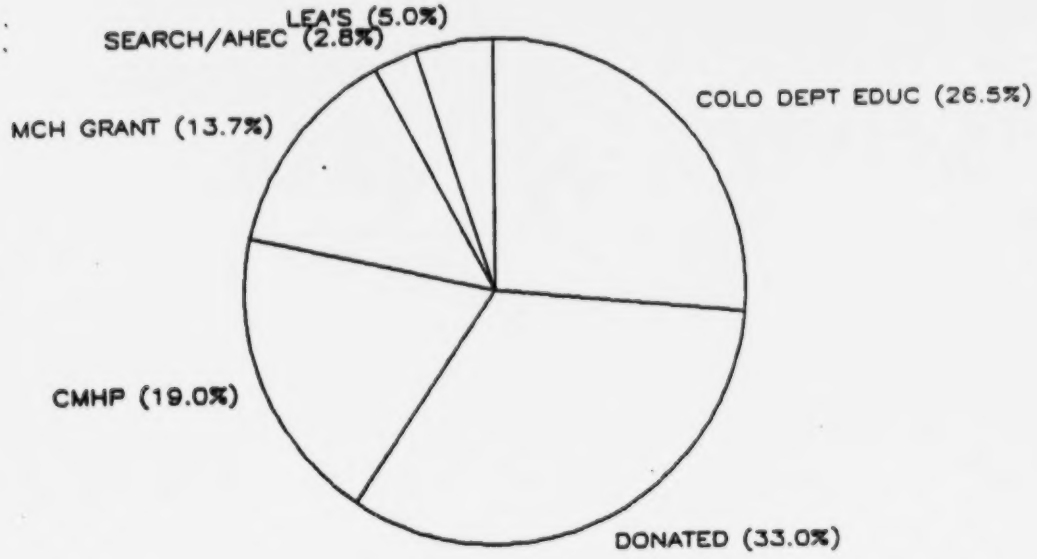
*Other sources include:

1.	SEARCH/AHEC	$ 11,700
2.	Donated Services	136,876
3.	LEA Contribution	20,800
		$ 169,376

The percentage of funds received from all the revenue sources is depicted graphically in the following figure:

FIGURE III

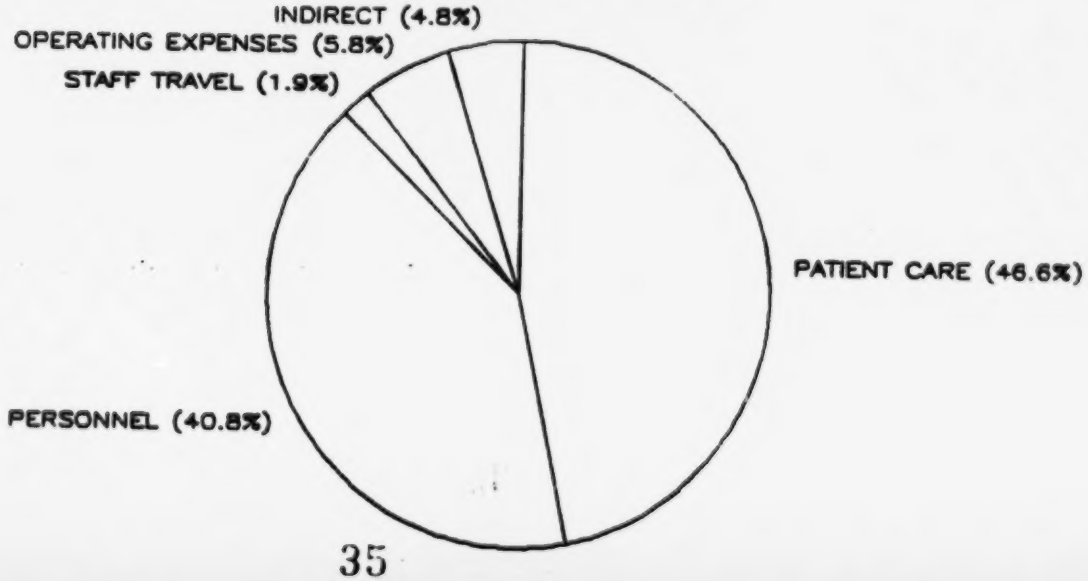
SOURCES OF REVENUE
MIGRANT EDUCATION HEALTH PROGRAM
-1989-



Allocation of all resources is depicted in the following figure:

FIGURE IV

ALLOCATION OF RESOURCES
MIGRANT EDUCATION HEALTH PROGRAM
-1989-



The specific contribution of the Migrant Education Program to the 1989 program effort is displayed in Table XIII and is depicted graphically in Figure V.

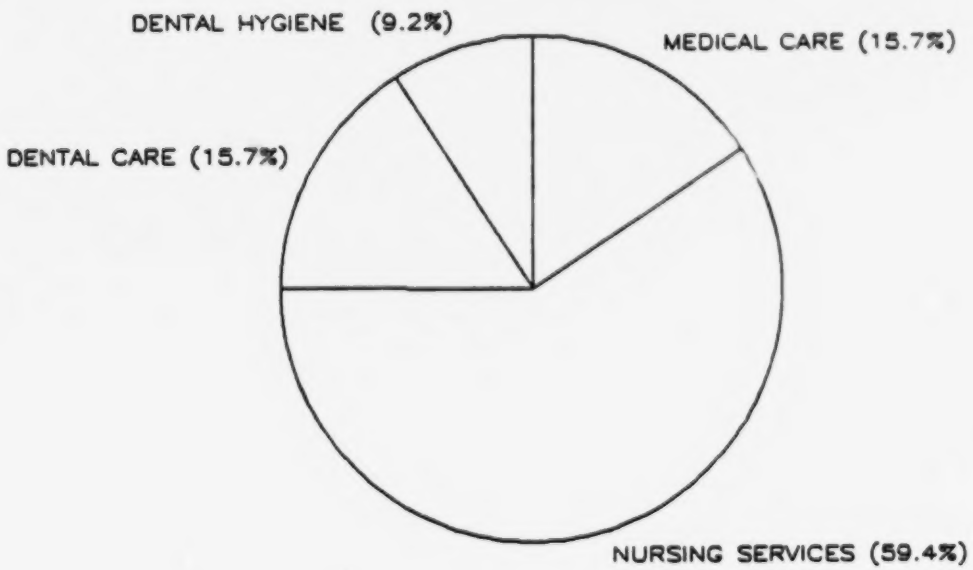
TABLE XIII

MIGRANT EDUCATION CONTRIBUTION
ALLOCATION BY SERVICE CATEGORY
- 1989 -

COST CATEGORY	AMOUNT ALLOCATED	PERCENT OF MIGRANT EDUCATION BUDGET
Medical Care	$ 17,240	15.7 %
Nursing Services	65,343	59.4
Dental Care	17,309	15.7
Dental Hygiene Services	10,108	9.2
TOTAL	$ 110,000	100 %

FIGURE V

MIGRANT EDUCATION
BUDGET ALLOCATION
BY SERVICE CATEGORY
-1989-



NOTES:

"Medical Care" includes reimbursement to local physicians, clinics, laboratories and others for medical treatment and services. It also includes medications and associated indirect costs.

"Nursing Services" includes nursing salaries, nursing students' stipends, 1/2 of the health education supply costs, nursing/medical supplies, nurses' travel, and associated indirect costs.

"Dental Care" includes dental treatment, dental students' stipends, and associated indirect costs.

"Dental Hygiene Services" includes dental hygienists' salaries, 1/2 of the health education supply costs, dental supplies, dental hygienists' travel, and associated indirect costs.

It is significant to note that although services were offered to Migrant Education Students at a cost to the Department of Education of $110,000, the total value of services offered far exceeded this amount. This is due to contributions from other sources of revenue and the cost-effective mechanisms which have been developed over the past several years. For example, major savings are gained in the Medical Cost category from the following sources:

- Several private physicians and local medical practices offer reduced rates for migrant children enrolled in the Migrant Education Program;
- Plan de Salud del Valle, Sunrise Community Health Center, and Valley Wide Health Services offer medical services to migrant students at minimal cost per patient visit. In addition, providers from Plan de Salud and Valley Wide made routine visits to the schools to provide medical services on site;
- Local pharmacists have agreed to offer services in accordance with MAC (maximum allowable costs) guidelines;
- Local health departments offer a multitude of services at minimal or no cost (e.g. immunizations).

In addition, the dental component offers a number of tangible examples of cost-effectiveness:

- When dental services are provided by a dental student under the direct supervision of local dentists, the cost to the program is only 1/3 to 1/2 the usual and customary charge;
- When dental services are provided at the Mesa County Health Department, there is no charge beyond the monthly stipend paid to the dental graduate who staffs the clinic;
- Both Plan de Salud del Valle and Sunrise Community Health Center provide comprehensive dental services to migrant students in Adams, Weld and Boulder Counties in return for minimal payments;

- Dental prophylaxis, topical fluoride applications, and individual students oral hygiene instruction are providedby dental hygienists in the migrant school with portable equipment. A total of 1,428 students received preventive services in 1989 (89% of all children screened). These services cost approximately $30.00 per patient in the private sector for a total cost of $42,840. The total cost to the Colorado Department of Education for dental hygienists in 1989 was $7,394, a cost savings of $35,446.

Table XIV shows the actual value of dental treatment provided and the actual amount paid for the treatment.

TABLE XIV

DENTAL TREATMENT COSTS
VALUE OF TREATMENT, EXPENDITURE BY SOURCE
- 1989 -

SITE	ACTUAL VALUE OF TREATMENT PROVIDED	ACTUAL AMOUNT PAID FOR TREATMENT	AMOUNT PAID BY MIGRANT EDUC. FUNDS	AMOUNT PAID BY CMHP OR MCH FUNDS
Brighton	$ 19,234	$ 2,000	$ 0	$ 2,000
Fort Lupton	42,168	2,000	0	2,000
Platteville	6,881	1,260	0	1,260
Longmont	32,796	5,244	0	5,244
Greeley	13,697	3,703	0	3,703
Fort Collins	5,393	3,152	1,217	1,935
Fort Morgan	7,377	4,248	0	4,248
Lamar	12,216	10,950	1,404	9,546
Rocky Ford	8,452	4,488	1,853	2,635
Pueblo	2,982	2,472	453	2,019
Alamosa	16,547	9,292	2,651	6,641
Grand Junction	5,136	0	0	0
Delta	4,997	2,791	1,599	1,192
TOTAL:	$ 177,876	$ 51,600	$ 9,177	$ 42,423

SECTION V

PREPARING FOR 1990

Program year 1990 will present a set of major challenges and opportunities to Colorado's Migrant Health/Migrant Education partnership.

Declining financial resources in the face of constant need, coupled with inflation, will dominate attention from both the Migrant Education and Migrant Health Programs. However, the strength of the collaborative relationship that exists between these two essential programs will help to minimize the effect of decreased funding.

In order for strategic planning to take place, it will be essential that migrant health personnel and migrant education personnel relook at their mission, goals, and objectives for meeting the health and educational needs of migrant students. Input from state migrant education consultants, local migrant education directors, recruiters, and records clerks, will assist migrant health personnel in planning health interventions for migrant students.

Targeted areas to be addressed in planning for the 1990 summer program include the following:

Students Served

In order to best provide health and education services for migrant students, numbers of students projected to be served will be critically important to planning strategies. In addition, the projected number of active migrant students versus settled-out and the ages of students at the local school will impact the distribution of resources.

Dates of Program

As noted in 1989, five to six week programs present significant challenges to the provision of health care services. Summer health providers were extremely frustrated that they were not able to provide the quality and degree of health intervention to migrant students because programs were short and active migrants did not arrive until the very end of the program. Indeed, the question must be posed: With dwindling resources, how can the Migrant Health Program, in coordination with the Migrant Education Program, operate most efficiently and consistently with the needs of the population? Those areas with short summer school programs or programs that end before active migrants arrive in the area may not warrant the placement of a full summer health team in that site.

Staffing

Projected numbers of students, migrant status, program dates, and resources available from the Colorado Department of Education will all impact staffing patterns of nurses and dental hygienists in each local area.

Health aides in each local school will continue to be of vital importance in the provision of transportation, translation, and assistance with health records so that health professionals can spend time providing direct care services to the students. Exploration is currently underway with Rocky Mountain SER to determine if collaboration will be possible in 1990 to obtain health aides through this agency.

Health Education and AIDS Education

In a continuing effort to assure that migrant students receive preventive information on how to make healthy choices for their lives, a continued focus on health education will be maintained.

In addition, AIDS education information will be a continued focus content area of the health education program, especially at the secondary level. Surveys were distributed at the state PAC meeting in December. Representatives from the local areas were asked to have migrant parents in their area complete these surveys and return to the CMHP. After evaluating parents' responses on these surveys, additional strategies for AIDS training and education activities can be planned. Possible strategies for 1990 include additional training of migrant education teachers, AIDS information/discussion groups with migrant parents, and additional classroom AIDS education.

APPENDIX

COMPARATIVE STATISTICS BY SCHOOL SITE -1989-

The following section is composed of various tables which outline by school site the incidence and follow-up of specific medical, and dental problems. These tables are presented to provide supporting data for the summary statistics which appear in the body of this report. This information may also be utilized in planning efforts directed toward maintaining and enhancing current efforts.

Examination of the tables reveals variations from site to site. A number of factors can contribute to these variations, for example, the enrollment of a large number of active versus recent settling-out farmworkers may increase the incidence of health related problems since the children may not receive ongoing care.

TABLE XV

TUBERCULOSIS TESTING (PPD) - RESULTS AND FOLLOW-UP
- 1989 -

	# SCREENED	ABNORMALS IDENTIFIED NUMBER	ABNORMALS IDENTIFIED PERCENTAGE	ABNORMALS FOLLOWED-UP NUMBER	ABNORMALS FOLLOWED-UP PERCENTAGE
Brighton Day School	58	4	6.9 %	4	100 %
Brighton Night School	6	1	16.7	1	100
Fort Lupton	124	5	4.0	5	100
Greeley	22	0	0	NA	NA
Platteville	17	0	0	NA	NA
Longmont	11	0	0	NA	NA
Fort Collins	5	0	0	NA	NA
Fort Morgan	5	1	20.0	1	100
Burlington	0	NA	NA	NA	NA
Lamar	26	4	15.4	4	100
Rocky Ford	10	0	0	NA	NA
Pueblo	11	1	9.1	1	100
Alamosa Day School	10	2	20.0	2	100
Alamosa Night School	19	2	10.5	2	100
Grand Junction	0	NA	NA	NA	NA
Delta	10	1	10.0	1	100
TOTAL:	334	21	6.3 %	21	100 %

TABLE

IMMUNIZA
- 198

SITE	IMMUNIZATION STATUS ASSESSED	# CHILDREN COMPLETE OR PROV. COMPLETE	# CHILD IMMUNI
Brighton Day School	119	80	37
Brighton Night School	10	8	2
Fort Lupton	185	111	54
Greeley	184	156	23
Platteville	88	64	8
Longmont	55	32	23
Fort Collins	56	41	3
Fort Morgan	16	9	6
Burlington	31	28	2
Lamar	121	102	19
Rocky Ford	67	43	20
Pueblo	18	9	4
Alamosa Day School	48	32	12
Alamosa Night School	32	26	5
Grand Junction	0	0	0
Delta	57	39	17
TOTAL:	1,087	780	235

* Consent form not signed, child moved or left school.

XVI

TIONS
9 -

REN ZED	TOTAL # OF IMMUNIZATIONS GIVEN	# CHILDREN WITH RECORDS NOT AVAILABLE	# CHILDREN NEEDING IMMUNIZATIONS BUT DID NOT RECEIVE *
	66	2	2
	2	0	0
	74	47	20
	41	10	5
	13	32	16
	32	30	0
	3	16	12
	10	1	1
	4	1	1
	40	13	0
	37	4	4
	6	9	5
	26	6	4
	8	25	1
	0	0	0
	35	5	0
	397	201	71

TABLE XVII

VISION PROBLEMS - INCIDENCE/FOLLOW-UP
- 1989 -

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP*	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Brighton Day School	119	14	8.5 %	14	100 %
Brighton Night School	10	1	10.0	1	100
Fort Lupton	232	22	9.5	22	100
Greeley	174	14	8.0	14	100
Platteville	98	8	8.2	7	87.5
Longmont	151	14	9.3	12	85.7
Fort Collins	82	9	11.0	9	100
Fort Morgan	68	6	8.3	6	100
Burlington	0	NA	NA	NA	NA
Lamar	121	7	5.8	7	100
Rocky Ford	173	15	8.7	13	86.7
Pueblo	73	5	6.8	5	100
Alamosa Day School	182	9	4.9	6	66.7
Alamosa Night School	51	10	19.6	9	90.0
Grand Junction	58	2	3.4	2	100
Delta	60	2	3.3	2	100
TOTAL:	1,652	138	8.4 %	129	93.5%

* Outcomes of follow-up for abnormals:
  Received new glasses: 95 students
  Broken glass frames repaired: 3 students
  Referred to optometrist/opthalmologist, but didn't need glasses: 15 students
  Refused to wear glasses (including those who already had glasses): 10 students
  Currently undergoing treatment for eye disorder/problem: 3 students
  Learning disability: 3 students

TABLE XVIII

HEARING PROBLEMS - INCIDENCE/FOLLOW-UP
- 1989 -

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP*	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Brighton Day School	119	1	0.8 %	1	100 %
Brighton Night School	10	0	0	NA	NA
Fort Lupton	232	4	1.7	2	50.0
Greeley	172	11	6.4	8	72.7
Platteville	98	4	4.1	3	75.0
Longmont	151	11	7.3	11	100
Fort Collins	82	2	2.4	2	100
Fort Morgan	66	3	4.5	3	100
Burlington	0	NA	NA	NA	NA
Lamar	121	4	3.3	4	100
Rocky Ford	173	16	9.2	15	93.8
Pueblo	73	6	8.2	6	100
Alamosa Day School	182	9	4.9	8	88.9
Alamosa Night School	51	1	2.0	1	100
Grand Junction	58	4	6.9	2	50.0
Delta	62	0	0	NA	NA
TOTAL:	1,650	76	4.6 %	66	86.8%

* Outcomes of follow-up for abnormals:
Referrals to Handicapped Children's Program (tubes, other surgery or intervention): 7 students
Ruptured eardrum: 4 students
Mild hearing loss identified, no intervention needed: 3 students
Hearing loss identified - follow-up and retest in one year: 7 students
Otitis media: 8 students
Wax: 24 students
Currently undergoing treatment for hearing problem: 3 students
Normal hearing: 10 students

TABLE XIX

ELEVATED BLOOD PRESSURE - INCIDENCE/FOLLOW-UP
- 1989 -

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Brighton Day School	119	0	0 %	NA	NA %
Brighton Night School	10	0	0	NA	NA
Fort Lupton	232	1	0.4	1	100
Greeley	175	0	0	NA	NA
Platteville	98	0	0	NA	NA
Longmont	151	0	0	NA	NA
Fort Collins	83	0	0	NA	NA
Fort Morgan	68	0	0	NA	NA
Burlington	0	NA	NA	NA	NA
Lamar	121	0	0	NA	NA
Rocky Ford	173	0	0	NA	NA
Pueblo	73	0	0	NA	NA
Alamosa Day School	182	0	0	NA	NA
Alamosa Night School	51	0	0	NA	NA
Grand Junction	58	0	0	NA	NA
Delta	62	0	0	NA	NA
TOTAL:	1,656	1	0.06 %	1	100 %

TABLE XX

SCOLIOSIS - INCIDENCE/FOLLOW-UP
- 1989 -

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP*	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Brighton Day School	19	0	0 %	NA	NA %
Brighton Night School	0	NA	NA	NA	NA
Fort Lupton	13	3	23.1	3	100
Greeley	32	3	9.4	3	100
Platteville	97	1	1.0	1	100
Longmont	64	1	1.6	1	100
Fort Collins	31	0	0	NA	NA
Fort Morgan	5	0	0	NA	NA
Burlington	0	NA	NA	NA	NA
Lamar	8	1	12.5	1	100
Rocky Ford	31	0	0	NA	NA
Pueblo	4	0	0	NA	NA
Alamosa Day School	10	0	0	NA	NA
Alamosa Night School	0	NA	NA	NA	NA
Grand Junction	13	0	0	NA	NA
Delta	10	0	0	NA	NA
TOTAL:	337	9	2.7 %	9	100 %

TABLE XXI
BELOW NORMAL HEMATOCRIT - INCIDENCE/FOLLOW-UP
- 1989 -

SITE	# SCREENED	ANEMIA IDENTIFIED		ANEMIA FOLLOWED-UP	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Brighton Day School	119	14	11.8 %	14	100 %
Brighton Night School	10	0	0	NA	NA
Fort Lupton	232	7	3.0	7	100
Greeley	175	10	5.7	9	90
Platteville	98	3	3.1	3	100
Longmont	151	2	1.3	2	100
Fort Collins	78	1	1.3	1	100
Fort Morgan	68	2	2.9	2	100
Burlington	0	NA	NA	NA	NA
Lamar	121	6	5.0	6	100
Rocky Ford	173	10	5.8	10	100
Pueblo	72	4	5.5	4	100
Alamosa Day School	182	2	1.1	2	100
Alamosa Night School	51	1	2.0	1	100
Grand Junction	58	0	0	NA	NA
Delta	61	2	3.3	2	100
TOTAL:	1,649	64	3.9 %	63	98.5 %

TABLE XXII
DENTAL PROBLEMS - INCIDENCE/FOLLOW-UP
- 1989 -

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP/ TREATMENT PROVIDED	
		NUMBER	PERCENT	NUMBER	PERCENT
Brighton	127	75	59 %	61	81 %
Fort Lupton	229	127	55	105	83
Greeley	172	108	63	93	86
Platteville	102	63	62	20	32 **
Longmont	159	97	61	93	96
Fort Collins	74	43	58	33	77
Fort Morgan	78	44	56	44	100
Lamar	70	56	80	56	100
Rocky Ford	141	93	66	59	42 *
Pueblo	70	29	41	19	66
Alamosa	270	140	52	97	69
Grand Junction	57	38	67	38	100
Delta	62	42	68	37	88
TOTAL:	1,611	955	59 %	755	79 %

* = Students Arrived Late in Area
** = Students Had Irregular Attendance

TABLE XXIII
DESCRIPTION OF DENTAL FOLLOW-UP NEEDED
- 1989 -

SITE	# SCREENED	NEED ROUTINE DENT. CARE		NEED EMERGENCY DENT. CARE	
		NUMBER	PERCENT	NUMBER	PERCENT
Brighton	127	73	57 %	2	2 %
Fort Lupton	229	122	53	5	2
Greeley	172	108	63	0	0
Platteville	102	58	57	5	5
Longmont	159	97	61	0	0
Fort Collins	74	43	58	0	0
Fort Morgan	78	43	55	1	1
Lamar	70	51	73	5	7
Rocky Ford	141	85	60	8	6
Pueblo	70	27	39	2	3
Alamosa	270	132	49	8	3
Grand Junction	57	38	67	0	0
Delta	62	41	66	1	2
TOTAL:	1,611	918	57 %	37	2 %

TABLE X
DENTAL FOLLOW-UP - STATUS OF TREAT
- 1989

SITE	# CHILDREN NEED. CARE	STATUS OF DENT. TREAT. RECEIVED		REASON N
		COMPLETE CARE	PARTIAL CARE	NOT REFER (LOW PRIORITY)
Brighton	75	51	10	0
Fort Lupton	127	105	0	0
Greeley	108	80	13	0
Platteville	63	0	20	0
Longmont	97	66	27	0
Fort Collins	43	32	1	0
Fort Morgan	44	44	0	0
Lamar	56	56	0	0
Rocky Ford	93	30	29	0
Pueblo	29	19	0	0
Alamosa	140	80	17	20
Grand Junction	38	38	0	0
Delta	42	33	4	0
TOTAL:	955	634	121	20

- 16 -

XIV
MENT/REASONS FOR NO TREATMENT

HY ABNORMAL DID NOT RECEIVE TREATMENT

.	NO CONSENT FORM OR PARENTS REF.	REFERRED BUT MOVED/ NO TIME	POOR ATTENDANCE/ DROPPED OUT	MEDICAID/ OWN DDS
	0	6	7	1
	6	1	15	0
	3	4	8	0
	0	34	9	0
	2	0	2	0
	0	10	0	0
	0	0	0	0
	0	0	0	0
	0	25	9	0
	0	0	2	8
	0	12	11	0
	0	0	0	0
	0	3	0	0
	11	97	63	9

TABLE X

TYPE AND NUMBER OF DENTAL TREATME

- 1989

SITE	DIAG.	PREVENTIVE	RESTORED SURFACES	CR MA
Brighton	457	281	110	
Fort Lupton	847	211	315	
Greeley	273	3	340	
Platteville	58	6	63	
Longmont	521	359	348	
Fort Collins	130	2	145	
Fort Morgan	131	1	265	
Lamar	193	36	219	
Rocky Ford	238	0	267	
Pueblo	36	36	42	
Alamosa	393	0	547	
Grand Junction	0	0	88	
Delta	120	0	145	
TOTAL:	3,397	935	2,894	

XV
NT SERVICES IN DENTAL OFFICES

OWNS/SP. INTAINER	ENDO.	ORAL SURGERY	SEALANTS	TOTAL SERVICE
2	11	13	211	1,085
4	25	27	531	1,960
19	19	36	125	815
2	3	1	26	159
17	18	30	161	1,454
9	7	9	24	326
7	4	25	0	433
17	19	14	10	508
16	12	13	6	552
0	4	3	46	167
19	25	22	10	1,016
3	2	4	1	98
8	6	19	0	298
123	155	216	1,151	8,871

TABLE XXVI
COST* OF DENTAL SERVICES PROVIDED IN DENTAL OFFICES BY TYPE
- 1989 -

SITE	DIAG.	PREV.	RESTORED SURFACES	CROWN/SP. MAINT.	ENDO.	ORAL SURG.	SEALANTS	TOTAL
Brighton	$ 0	$ 0	$1,700	$ 100	$ 100	$ 100	$ 0	$ 2,000
Ft. Lupton	0	0	1,700	100	100	100	0	2,000
Greeley	467	0	2,219	558	140	146	173	3,703
Platteville	0	0	1,000	200	30	30	0	1,260
Longmont	418	0	3,836	490	80	265	153	5,244
Ft. Collins	525	20	1,906	302	141	113	145	3,152
Ft. Morgan	475	15	2,966	385	155	252	0	4,248
Lamar	1,850	766	5,641	1,530	829	176	158	10,950
Rocky Ford	873	0	2,566	635	220	165	29	4,488
Pueblo	313	149	1,530	0	180	105	195	2,472
Alamosa	1,438	0	6,359	542	673	220	60	9,292
Grd. Junct.	0	0	0	0	0	0	0	0
Delta	507	0	1,616	207	280	181	0	2,791
TOTAL:	$6,866	$ 950	$33,039	$5,049	$2,928	$1,853	$ 915	$51,600

* Includes cost from all sources except medicaid or private insurance.

TABLE XXVII
PREVENTIVE DENTAL SERVICES BY DENTAL HYGIENISTS
Prophylaxis, Topical Fluoride Application, Dental Counseling
- 1989 -

SITE	NUMBER SCREENED	RECEIVING PREVENTIVE SERVICES	
		NUMBER	PERCENT
Brighton	127	122	96 %
Fort Lupton	229	208	91
Greeley	172	160	93
Platteville	102	64	63
Longmont	159	147	92
Fort Collins	74	62	84
Fort Morgan	78	58	74
Lamar	70	36	51
Rocky Ford	141	118	84
Pueblo	70	66	94
Alamosa	270	268	99
Grand Junction	57	57	100
Delta	62	61	98
TOTAL:	1,611	1,427	89 %

TABLE XXVIII
GROUP HEALTH EDUCATION SERVICES BY NURSES
- 1989 -

SITE	CAMP and FAMILY NIGHT PRESENTATIONS		CLASSROOM EDUCATION		STAFF IN-SERVICE	
	# SESSIONS	# PEOPLE	# SESSIONS	# PEOPLE	# SESSIONS	# PEOPLE
Brighton	0	0	8	134	0	0
Fort Lupton	1	60	10	227	1	20
Platteville	0	0	23	323	0	0
Greeley	0	0	24	500	0	0
Longmont	2	40	12	320	1	20
Fort Collins	1	14	14	408	0	0
Fort Morgan	1	15	21	305	1	10
Lamar	0	0	13	282	0	0
Rocky Ford	0	0	9	146	0	0
Pueblo	3	41	0	0	0	0
Alamosa	0	0	12	249	1	13
Grand Junction	1	70	1	25	1	8
Olathe	2	11	14	270	0	0
TOTAL:	11	251	161	3,189	5	71

TABLE XXIX
GROUP HEALTH EDUCATION SERVICES BY DENTAL HYGIENISTS/DENTAL STUDENTS
- 1989 -

SITE	FAMILY NIGHT PRESENTATIONS		CLASSROOM EDUCATION		STAFF IN-SERVICES	
	# SESSIONS	# PEOPLE	# SESSIONS	# PEOPLE	# SESSIONS	# PEOPLE
Brighton	0	0	2	46	0	0
Fort Lupton	0	0	14	192	1	12
Platteville	0	0	5	61	0	0
Greeley	0	0	12	376	0	0
Longmont	0	0	9	123	1	10
Fort Collins	2	56	6	107	0	0
Fort Morgan	1	225	4	98	0	0
Lamar	0	0	4	112	0	0
Rocky Ford	1	18	9	103	0	0
Pueblo	1	15	0	0	0	0
Alamosa	0	0	5	125	1	13
Grand Junction	2	77	1	58	1	8
Delta	0	0	8	125	0	0
TOTAL:	6	391	79	1,526	4	43